

CLAIMS

What is claimed is:

1. A system for writing position information to a rotatable medium, comprising:

5 a rotatable medium capable of storing information written to the rotatable medium;

 a write element capable of writing information to the rotatable medium; and

 a control mechanism adapted to rotate the rotatable medium and
10 position the write element relative to the rotatable medium, such that the write element can:

 write a first servo burst during a first pass of a write element over a rotatable medium;

 trim the first servo burst during a second pass of the write
15 element;

 write a second servo burst during a third pass of the write element; and

 write a third servo burst during a fourth pass of the write
 element, wherein the first servo burst, second servo
20 burst, and third servo burst each have an edge that
 can be used to determine position during a
 subsequent pass over those burst patterns.

2. A system according to claim 1, wherein:

25 the rotatable medium is selected from the group consisting of magnetic disks, optical disks, and laser-recordable disks.

3. A system according to claim 1, wherein:

 the first servo burst, second servo burst, and third servo burst each
30 have an edge that is positioned approximately along a track line, the track
 line extending circumferentially about the disk.

4. A system according to claim 1, further comprising:
a read element adapted to read the first servo burst, second servo burst, and third servo burst on a subsequent pass over the rotatable medium.
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5. A system according to claim 4, further comprising:
a read/write head containing the read element and the write element.
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6. A system according to claim 5, further comprising:
read circuitry adapted to accept information from the read element and determine the position of the read/write head.
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7. A system according to claim 1, wherein:
the write element trims the first servo burst to have a trimmed edge defining a first portion of a burst boundary, and the write element writes each of the second and third servo bursts to have a written edge, the written edges defining a second portion of the burst boundary.
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8. A system according to claim 1, wherein:
the write element is further adapted to trim the first servo burst such that the width of the first servo burst after trimming is approximately equal to the width of a track of servo data.
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9. A system according to claim 1, wherein:
the write element only writes the third servo burst if the boundary defined by the first and second servo bursts determines the position of a data track centerline.
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10. A system according to claim 1, wherein:
the write element is further adapted to write the first, second, and

third servo bursts in a servo wedge on the rotatable medium.

11. A system according to claim 1, wherein:

5 the write element undergoes the third pass occurs before the second pass.

12. A system for writing position information to a rotatable medium, comprising:

10 a rotatable medium capable of storing information written to the rotatable medium;

a write element capable of writing information to the rotatable medium; and

15 a control mechanism adapted to rotate the rotatable medium and position the write element relative to the rotatable medium, such that the write element can:

write a first servo burst during a first pass of the write element over the rotatable medium;

trim the first servo burst during a second pass of the write element;

20 write a second servo burst during a third pass of the write element wherein the first servo burst and second servo burst each have an edge forming a burst boundary that can be used to determine the position of the write element during a subsequent pass over those burst patterns; and

25 write a third servo burst during a fourth pass of the write element if the burst boundary defines the position of a data track centerline.

30 13. A system according to claim 12, wherein:

the write element trims less than all of the first servo burst during the

second pass.

14. A system according to claim 12, wherein:

5 the write element can use a fifth pass to trim that portion of the first servo burst that was not trimmed during the second pass.

15. A system for writing position information to a rotatable medium, comprising:

10 a rotatable medium capable of storing information written to the rotatable medium;

a write element capable of writing information to the rotatable medium; and

15 a control mechanism adapted to rotate the rotatable medium and position the write element relative to the rotatable medium, such that the write element can:

write at least a portion of a first burst pattern during a first pass of a write element over a rotating medium;

trim at least a portion of a first burst pattern during a second pass of the write element;

20 write at least a portion of a second burst pattern during a third pass of the write element, wherein the first burst pattern and second burst pattern each have an edge defining a burst boundary that can be used to determine the position of the write element during a subsequent pass over those patterns; and

25 write at least a portion of a third burst pattern during a fourth pass of the write element if the boundary defines the position of a track centerline, wherein the third burst pattern is also used to define the burst boundary.

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16. A system for writing position information to a rotatable medium,

comprising:

means for writing a first servo burst during a first pass of a write element over a rotatable medium;

5 means for trimming the first servo burst during a second pass of the write element;

means for writing a second servo burst during a third pass of the write element; and

10 means for writing a third servo burst during a fourth pass of the write element, wherein the first servo burst, second servo burst, and third servo burst each have an edge that can be used to determine position during a subsequent pass over those burst patterns.